

CLAIMS

What is claimed is:

1. An electrical connector comprising:

a housing having a deflectable cantilevered mating connector latch arm, wherein the latch arm is movable between a latched position and an unlatched position;

electrical contacts connected to the housing; and

a connector position assurance (CPA) member movably mounted to the housing between an open position and a closed position, the CPA member comprising a top section and two downwardly extending rails slidably located in grooves of the housing at a front side of the housing, each rail having a bottom end adapted to contact a shorting clip of a mating electrical connector and move the shorting clip off of connection with contacts of the mating electrical connector, wherein a first one of the rails comprises a wedge surface and a detent locating surface, wherein the wedge surface is adapted to be contacted by the mating electrical connector to deflect the first rail, and when the CPA member is moved to the closed position, the detent locating surface is adapted to be positioned below a detent surface of the housing to retain the CPA member in the closed position.

2. An electrical connector as in claim 1 wherein the wedge surface is located on a first projecting extending

from the first rail in a direction towards a second one of the rails.

3. An electrical connector as in claim 2 wherein the projection has a general pyramid shaped cross section.

4. An electrical connector as in claim 2 wherein the detent locating surface comprises a second projection extending in the same direction as the first projection.

5. An electrical connector as in claim 4 wherein the detent locating surface of the housing comprises a portion of the housing having a lateral facing receiving area for receiving the second projection.

6. An electrical connector as in claim 1 wherein the first rail is adapted to be deflected in an outward direction by the mating electrical connector.

7. An electrical connector as in claim 1 wherein the electrical connector comprises a space between the rails for receiving a portion of a housing of the mating electrical connector.

8. An electrical connector as in claim 1 wherein the rails each comprised latch protrusions for movably latching the CPA member to the housing.

9. A method of assuring a position of an electrical connector in a mating connector comprising steps of:

inserting a portion of the electrical connector into the mating connector, the electrical connector comprising a housing and a connector position assurance (CPA) member movably mounted to the housing, the CPA member comprising a top section and

two downwardly extending rails slidably located in grooves of the housing at a front side of the housing, each rail having a bottom end adapted to contact a shorting clip of a mating electrical connector and move the shorting clip off of connection with contacts of the mating electrical connector;

deflecting a section of a first one of the rails of the CPA member from a home position by contact of the section with a housing of the mating connector as the CPA member is inserted into the mating connector; and

moving the CPA member of the electrical connector from an open position on the housing of the electrical connector towards a closed position, wherein the step of moving comprises allowing the section of the first rail to deflect back to the home position and, as the first rail is deflected back to the home position, locating a detent section of the first rail below a detent portion of the housing of the electrical connector to retain the CPA member in the closed position.

10. A method as in claim 9 wherein the step of section of the first rail comprises a projection extending towards a second one of the rails, and the step of deflecting comprises deflecting the section in an outward direction.
11. A method as in claim 10 wherein the housing of the mating connector extends, at least partially, between the rails to deflect the section outward.

12. A method as in claim 9 wherein the step of locating the detent section of the first rail below a detent portion of the housing of the electrical connector comprises moving the detent section into a lateral facing receiving area of the housing of the electrical connector.

13. A method as in claim 9 further comprising the bottom ends of the rails contacting the shorting clip as the CPA member is moved to the closed position and moving the shorting clip off of connection with the contacts of the mating connector.